



Block Copolymers: Synthesis, Self-Assembly, and Biomedical Applications

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Message from the Guest Editors

Dear Colleagues,

Block copolymers are a particularly interesting class of polymers that can be synthesized by various synthetic strategies and point towards new, emerging applications. The development of controlled polymerization methods enables scientists to polymerize a wide range of functional monomers with precise control over the macromolecular architecture.

The incorporation of both hydrophilic and hydrophobic blocks, or blocks that have the ability to respond to various external stimuli (temperature, pH, light, enzyme/protein concentration etc.), can lead to novel polymeric materials with tailored properties.

Amphiphilic block copolymers have the ability to self-assemble into different morphologies, such as micelles, rods, worms, or vesicles, when dispersed into aqueous media. Stimuli-responsive copolymers can also change their properties upon alteration of certain physicochemical parameters. These morphologies can be further utilized in several biomedical applications.

The aim of this Special Issue is to highlight the recent progress in block copolymers synthesis, as well as to investigate their self-assembly properties along with their biomedical applications.



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